



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No.: 10/604,703 Confirmation No.: 1702
Applicant : Elder et al.
Filed : August 11, 2003
Title : Multiple Battery System and Auxiliary Battery Attachment System
TC/A.U. : 2838
Examiner : Pia Florence Tibbits
Docket No. : 013476-05187

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SECOND DECLARATION OF WILLIAM J. WEISS UNDER 37 C.F.R. § 1.132

I, William J. Weiss, make this declaration on personal knowledge and declare as follows:

1. I am a practicing Electronic Engineer and am currently General Manager of Total Engineering Solutions, LLC of Deerfield Beach, Florida. Total Engineering Solutions, LLC and Reserve Power Cell, LLC, assignee of the above-identified patent application, are commonly owned. I inadvertently failed to indicate the relationship between Total Engineering Solutions, LLC and Reserve Power Cell, LLC in my prior declaration dated November 23, 2005.
2. I have been designing and overseeing the design of various analog and digital circuits for the past 13 years, including various control circuits. I received a T6 Degree in Electronic Engineering from Johannesburg Technical College, Johannesburg, South Africa in 1992. Based on my understanding, the T6 Degree in Electronic Engineering is equivalent to a Bachelor of Science in Electrical Engineering. Prior to joining Total Engineering Solutions, I was Vice President of Hedmor Inc. of Coral Springs, Florida.
3. I have read U.S. Patent Application Serial No. 10/604,703 (hereinafter "the '703 Application"), including the specification and drawings, and understand the contents thereof.
4. I have also read and understand the Office Action dated March 30, 2006 ("Office

Action") and all the references that have been cited by Applicants or the Examiner in connection with the '703 Application, particularly including the brochure on Exide Switch Technology cited by the Examiner in the Office Action (hereinafter the "Exide Switch Brochure").

5. I have further read and understand pending claims 88-105.
6. Finally, I have also read and understand the references cited by Applicants in their Supplemental Information Disclosure Statement to be submitted concurrently with their response to the Office Action. In particular, I have read and understand (1) the article published on September 25, 1989 and entitled "Neon Colors Jazz Up APAA Show; 'spare' batteries spark interest despite high prices – Automotive Parts and Accessories Association" (hereinafter the "APAA Show Article"), (2) the article published on January 29, 1990 and entitled "Spare" battery prices ease at discounters – automobile batteries", and (3) the laboratory testing report issued by EG and G Idaho, Inc. under a contract with the Department of Energy and entitled "Laboratory testing of GNB switch 12 volt SLI (starting, lighting and ignition) battery" (hereinafter the "DOE Report").
7. Based on my understanding, the Exide Switch Brochure is an advertisement for the Exide Switch battery, which was sold by GNB International, a U.S. subsidiary of the Australian company Pacific Dunlop.
8. As disclosed in the Exide Switch Brochure, the Exide Switch battery has a main battery unit and a reserve battery unit integrated into a single device using so-called Pulsar Technology. The two units are linked by a switching mechanism that controls the discharge of the reserve unit. The main unit is separated from the reserve unit by a one-way diode that serves to allow power to flow from the reserve unit when the switch is pushed to the "Reserve" position.
9. The Exide Switch Brochure fails to disclose how the main and reserve units interact when a switch is pushed to the "Reserve" position.

10. As disclosed in the AAPA Show Article, the GNB (Exide) Switch battery provides a total of 640 cold cranking amps (CCAs), including 460 CCAs in the main battery and the balance of 180 CCAs in the reserve battery.
11. It is well known to those in the electrical engineering community that the amount of current supplied by two current sources placed in parallel is the sum of the currents supplied by the individual current sources.
12. Therefore, based upon my understanding and in my opinion, the AAPA Show Article inherently discloses that the GNB (Exide) Switch battery is a dual battery system in which the main battery is placed in parallel with the spare battery when the switch is moved from the "Main" position to the "Reserve" position due to the CCA specification of the GNB Switch battery.
13. The DOE Report was issued based on laboratory testing of the GNB Switch 12 Volt SLI Battery. The DOE Report was published in March 1990, less than one year after the date stamp of the U.S. Patent and Trademark Office on the Exide Switch Brochure.
14. As disclosed in the Background section on page 1 of the DOE Report, the GNB Switch 12 Volt SLI Battery consists of two batteries in one package which can be connected in parallel by a switch for higher cranking energy or reserve capacity. The smaller second battery is float charged through a diode. The initial design work on the Switch was done in Australia under the Pulsar name by Pacific Dunlop. In other words, the Switch battery discussed in the DOE Report uses the Pulsar technology developed by Pacific Dunlop.
15. As disclosed on page 1 of the Exide Switch Brochure, the Exide Switch battery is two batteries in one--a conventional main battery and a reserve unit. As further disclosed in the Exide Switch Brochure, the Exide Switch battery was made possible through the use of Pulsar Technology, and the main and reserve units are separated by a one-way diode which acts like a valve.

16. The photographs of the Exide Switch battery on page 1 and the upper left side of page 2 of the Exide Switch Brochure are strikingly similar to the photographs of the GNB Switch battery on pages 5 and 10 of the DOE Report.

17. Based on my analysis of the DOE Report and the Exide Switch Brochure, it is my opinion that the GNB Switch battery discussed in the DOE Report is identical or substantially similar in all material respects to the Exide Switch battery that is the subject of the Exide Switch Brochure.

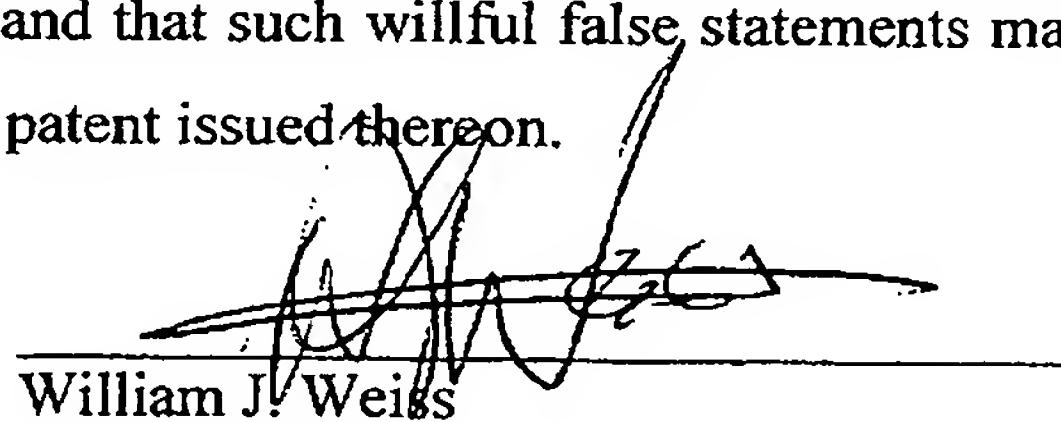
18. Therefore, based upon my understanding and analysis of the Exide Switch Brochure, the AAPA Show Article and the DOE Report, the Exide Switch battery is a battery system that utilizes a switch to connect a spare or reserve battery *in parallel* with a main battery when additional power is needed to start a car or otherwise. In other words, the Exide Switch battery is a battery system that delivers electrical energy to an electrical system through a main battery either alone or in combination (i.e., in parallel) with a standby battery.

19. My understanding of the operation of the Switch battery disclosed in the Exide Switch Brochure is consistent with the understanding of others in the relevant art. In particular, the Exide Switch Brochure was cited as prior art in U.S. Patent No. 5,162,164 issued to Dougherty et al. ("the '164 Patent") and U.S. Patent 5,002,840 issued to Klebenow et al. ("the '840 Patent"), as indicated on the front pages of those patents. I reviewed the '164 Patent and the '840 Patent and, based on my review thereof, the inventors of the '164 Patent agree with my assessment that the Exide Switch Brochure discloses a battery system in which a main battery is arranged *in parallel* with the reserve battery. In particular, at line column 1, line 63, through column 2, line 18, the '164 Patent discusses the operation of the battery system disclosed in the Exide Switch Brochure and clearly states that the "two batteries are electrically configured *in parallel*, with a one-way diode disposed therebetween to prevent the reserve unit from discharging during periods of non-use" (emphasis added).

20. Therefore, while the Exide Switch Brochure discloses an electrical system having a main battery, a standby battery, a one-way charging circuit, and a switching device operable in multiple operating positions, the Exide Switch Brochure does not disclose or suggest a switching device that permits use of the standby battery independently of the main battery, such that the main battery and the standby battery never supply electrical energy to the electrical system simultaneously.

21. In contrast to the Exide Switch Brochure and the other references of record, Applicants' invention as recited in pending claims 88, 95, 104, and 105 provides for at least one standby battery to be immediately and independently switched into operation to be the sole supplier of electrical energy to an electrical system in the event that a main battery is discharged for any reason. After such a switch, the electrical system can be fully operated solely by the standby battery until the main battery is repaired, recharged, or replaced. With Applicants' invention, the main battery and the standby battery never supply electrical energy to the electrical system in parallel or otherwise simultaneously.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the '703 Application or any patent issued thereon.



William J. Weiss

Date: 4/28/06



tertiary

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ter·ti·ary  [Pronunciation Key](#) (tûr' shĕ-ĕr'ĕ)
adj.

1. Third in place, order, degree, or rank.
2. Of, relating to, or designating the short flight feathers nearest the body on the rear edge of a bird's wing.
3. *Chemistry.*
 - a. Of or relating to salts of acids containing three replaceable hydrogen atoms.
 - b. Of or relating to organic compounds in which a group, such as an alcohol or amine, is bound to three nonelementary radicals.
4. **Tertiary** Of or belonging to the geologic time, system of rocks, or sedimentary deposits of the first period of the Cenozoic Era, characterized by the appearance of modern flora and of apes and other large mammals. See table at [geologic time](#).

n. pl. **ter·ti·ar·ies**

1. A tertiary feather.
2. **Tertiary** The Tertiary Period or its system of deposits.
3. *Roman Catholic Church.* A member of a religious Third Order.

[Latin *tertiārius*, from *tertius*, *third*. See *trei-* in Indo-European Roots.]

BEST AVAILABLE COPY[\[Download Now or Buy the Book\]](#)**Source:** *The American Heritage® Dictionary of the English Language, Fourth Edition**Copyright © 2000 by Houghton Mifflin Company.**Published by Houghton Mifflin Company. All rights reserved.***ter·ti·ary** (tûr' shé-ĕr'ē)*adj.*

1. Third in place, order, degree, or rank.
2. Of or relating to salts of acids containing three replaceable hydrogen atoms.
3. Of or relating to organic compounds in which a group is bound to three nonelementary radicals.

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Main Entry: ¹**ter·ti·ary****Pronunciation:** 't&r-shE-''er-E, 't&r-sh&-rE**Function:** *noun***Inflected Form:** *plural -ries***1 :** TERTIARY COLOR**2 :** a lesion of tertiary syphilis**Source:** *Merriam-Webster's Medical Dictionary*, © 2002 Merriam-Webster, Inc.**Main Entry:** ²**tertiary****Function:** *adjective***1 :** of third rank, importance, or value**2 a :** involving or resulting from the substitution of three atoms or groups <a *tertiary* salt> **b :** being or containing a carbon atom having bonds to three other carbon atoms <an acid containing a *tertiary* carbon> **c :** of, relating to, or being the normal folded structure of the coiled chain of a protein or of a DNA or RNA — compare PRIMARY 4 SECONDARY 3**3 :** occurring in or being a third stage <*tertiary* lesions of syphilis>**4 :** providing tertiary care <a *tertiary* medical center>**Source:** *Merriam-Webster's Medical Dictionary*, © 2002 Merriam-Webster, Inc.**tertiary****adj :** coming next after the second and just before the fourth in position [syn: third, 3rd] **n :** from 63 million to 2 million years ago [syn: Tertiary, Tertiary period]**Related ads:**

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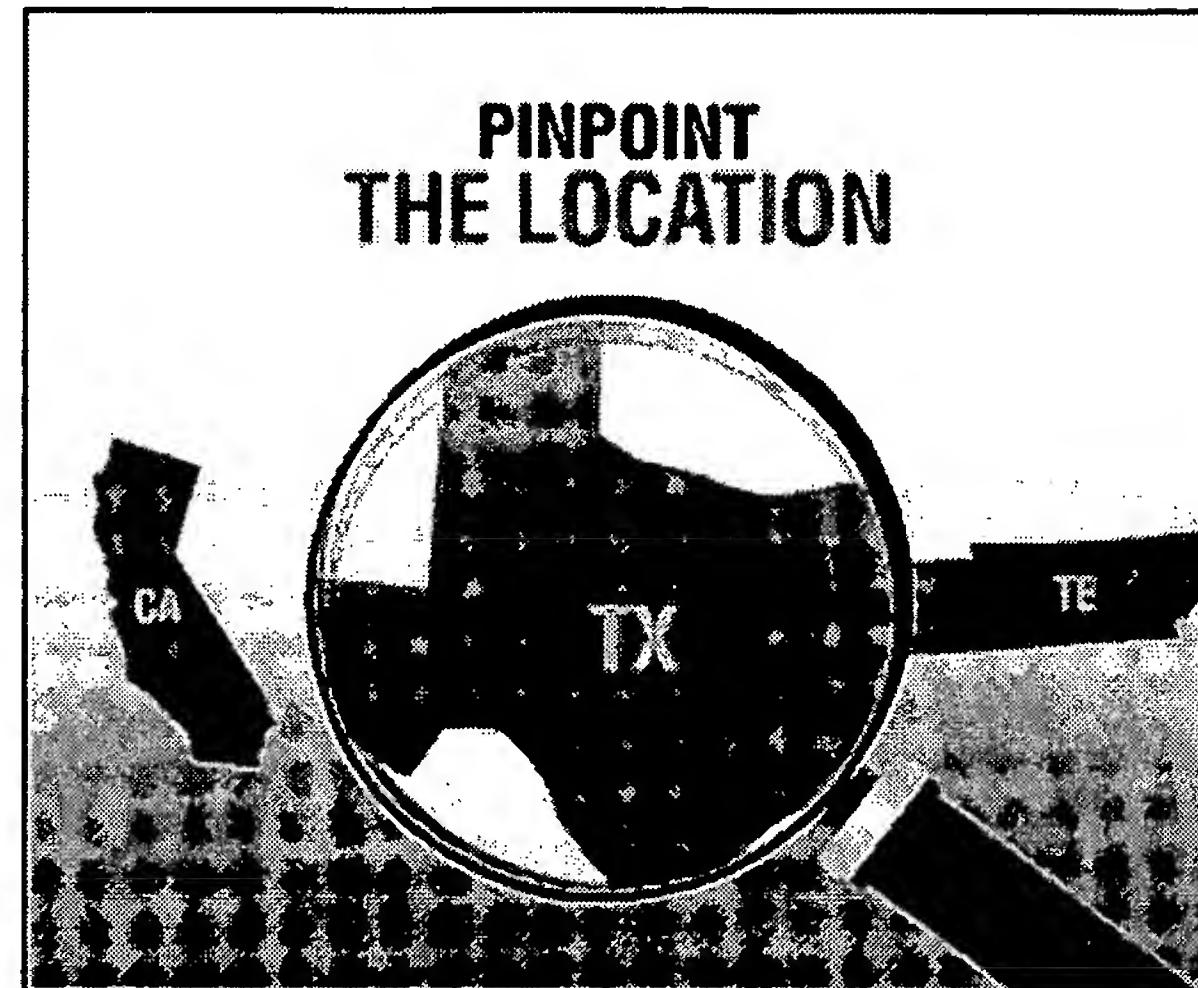
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